

WHAT IS CLAIMED IS:

1. A flip chip bonding method for mounting a semiconductor element on a wiring board comprising steps of:

5 applying a pressure and a heat to solder bumps, formed on both or one of a connecting pad of the semiconductor element or a connecting pad of the wiring board for connecting the solder bumps under a state that the solder bumps are in contact and fused while an
10 ultrasonic bonding head is moved in a plurality of directions or along a circular locus.

2. The flip chip bonding method according to Claim 1, wherein the steps of connecting the solder bumps is performed by a device, in which an inactive atmosphere or
15 a reducing atmosphere is formed.